Region:	Liguria			**Archetype code:** RES_APPBLOCK_ 1971-1980_E_LIG
Building category:	Residential buildings – Apartments in multi-family block			
Period of construction:	1971-1980			
Climatic zone:	E	**Number of records:**	763	

Description:

External walls: no data available
Roof slabs: no data available

Data sources:
EPC databases (100%)

	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Q2 (Median value)	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{footprint}$	m^2	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	-	-	-	-	-
	Heated gross volume	$V_{H;g}$	m^3	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m^3	-	-	-	-	-
	Compactness ratio	$A_{env}/V_{H;g}$	m^{-1}	0.59	0.24	0.38	0.61	0.73
	WWR – North orientation	WWR_N	-	-	-	-	-	-
	WWR – South orientation	WWR_S	-	-	-	-	-	-
	WWR – East orientation	WWR_E	-	-	-	-	-	-
	WWR – West orientation	WWR_W	-	-	-	-	-	-
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.11	0.03	0.09	0.10	0.11
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	$W/(m^2 \cdot K)$	1.41	0.64	0.98	1.56	1.80
	External walls type	-						
	U-value of the wall	U_{wl}	$W/(m^2 \cdot K)$	1.20	0.39	1.05	1.18	1.35
	Slab on ground floor type	-						
	U-value of the floor	$U_{fl;lw}$	$W/(m^2 \cdot K)$	1.50	0.37	1.39	1.53	1.67
	Windows type	-						
	U-value of the windows	U_W	$W/(m^2 \cdot K)$	4.11	1.19	3.13	4.30	5.00
	Shading system type	-						
GAINS and VENTILATION	Occupancy density *	O_C	$person/m^2$	UNI EN 16798-1 - Table A.19				
	Lighting power density *	W_L	W/m^2	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m^2	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	n	h^{-1}	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Unknown 94%; Autonomous: 6%						
	Heating generator	Traditional boiler: 42%; Unknown 35%; Condensing boiler: 15%; Fireplace: 6%; Heat exchanger of district heating/cooling: 2%						
	Daily operating time of the heating system *	t_H	h	14	0	14	14	14
	Energy carrier	Natural gas: 37%; Unknown: 35%; Electricity and natural gas: 16%; Electricity and solid biomass: 5%; LPG: 2%; Gas Oil: 2%; District heating: 1%; Solid biomass: 1%; Electricity: 1%						
	Heating emission sub-system	Radiators: 62%; Unknown: 35%; Air Ducts: 2%; Radiant panels: 1%						
	Cooling system type	Unknown: 99%; Heat pump air-air: 1%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	Unknown: 65%; Electric boiler: 13%; Condensing boiler: 12%; Natural gas boiler: 5%; Electric heat pump: 4%; Other: 1%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

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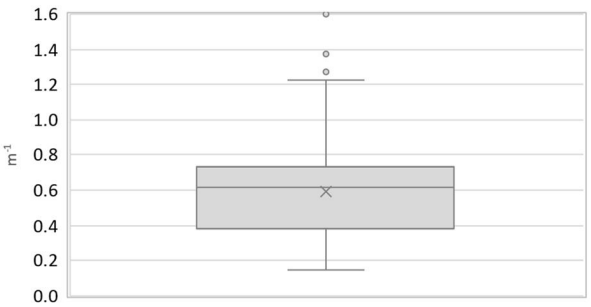
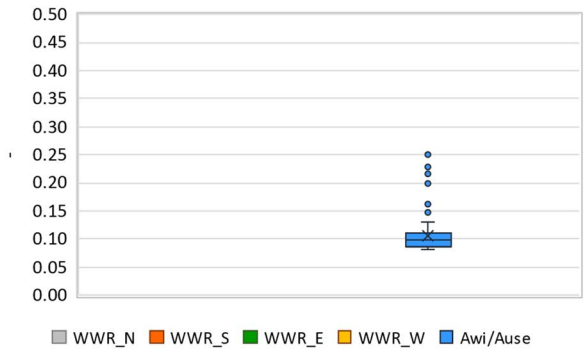
Numerical variables – GEOMETRY

COMPACTNESS RATIO

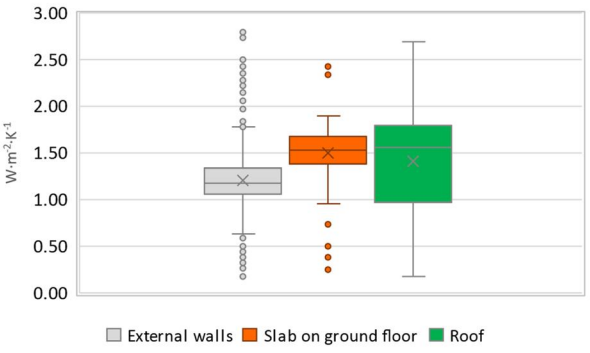


WINDOWS TO WALL RATIO

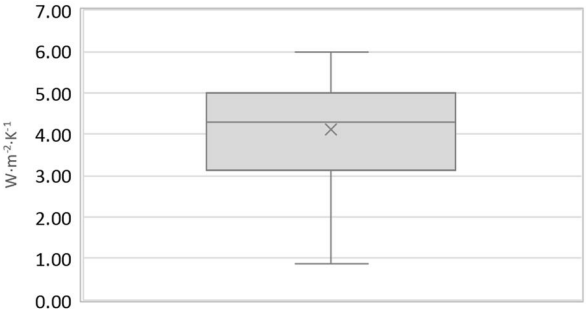


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE



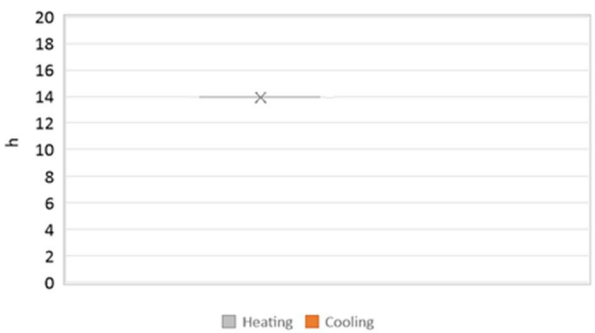
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

AIR EXCHANGE RATE

OCCUPANCY DENSITY

INTERNAL GAINS POWER DENSITY

DAILY OPERATING TIME

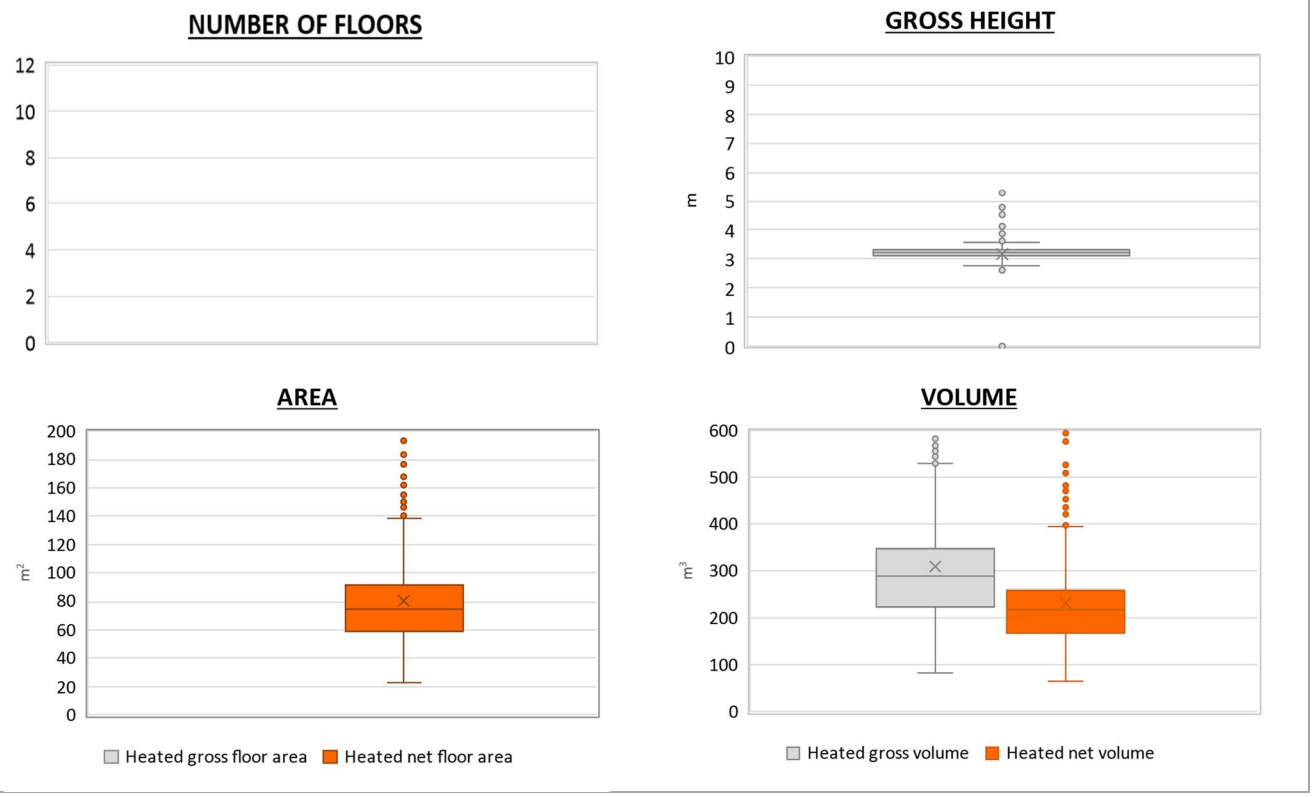


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 1971-1980_E_LIG
Period of construction:	1971-1980			
Climatic zone:	E	**Number of records:**	763	

ADDITIONAL DATA

	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H_n	m	3.2	0.2	3.1	3.2	3.3
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m²	80.2	43.3	58.6	74.7	91.1
	Heated gross volume	$V_{H;g}$	m³	309.8	182.3	223.9	288.3	346.5
	Heated net volume	$V_{H;n}$	m³	233.1	153.6	168.0	217.3	259.2
THERMAL SYSTEMS	Heating efficiency or *COP*	$\eta_{H;gen}$ or $COP_{H;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *	$P_{H;gen}$	kW	22.1	7.6	21.3	24.0	24.3
	Cooling efficiency or *EER*	$\eta_{C;gen}$ or $EER_{C;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power *	$P_{C;gen}$	kW	-	-	-	-	-
	Temperature of DHW	θ_W	°C	-	-	-	-	-
	DHW system power *	$P_{W;gen}$	kW	17.8	10.5	2.5	23.7	24.0
	* These values refer to the apartment scale							

Additional data: GEOMETRY (the plots refer to the apartment scale)

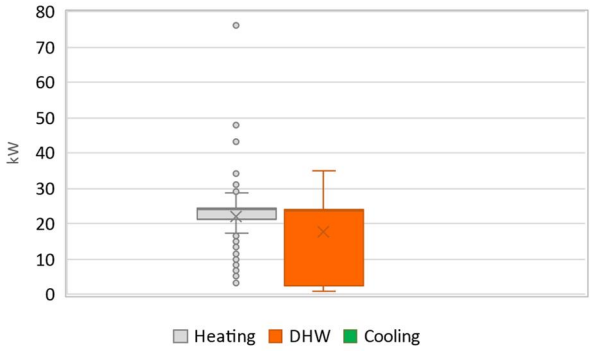


Region:	Liguria			**Archetype code:**
Building category:	Residential buildings – Apartments in multi-family block			RES_APPBLOCK_ 1971-1980_E_LIG
Period of construction:	1971-1980			
Climatic zone:	E	**Number of records:**	763	

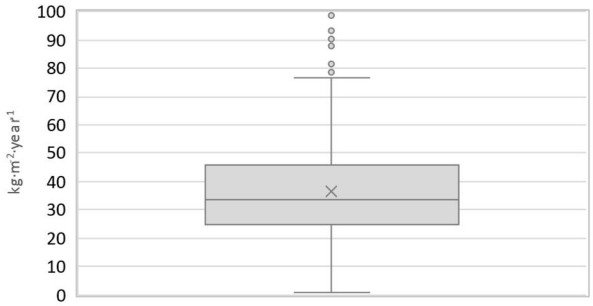
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

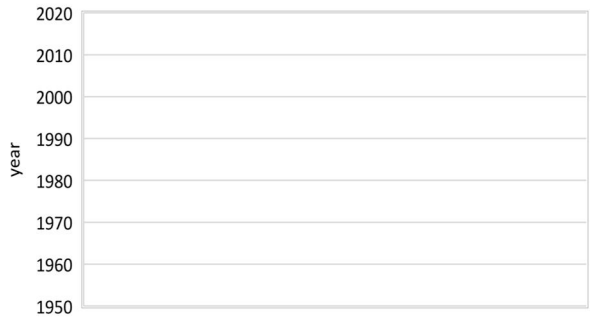
SYSTEM POWER



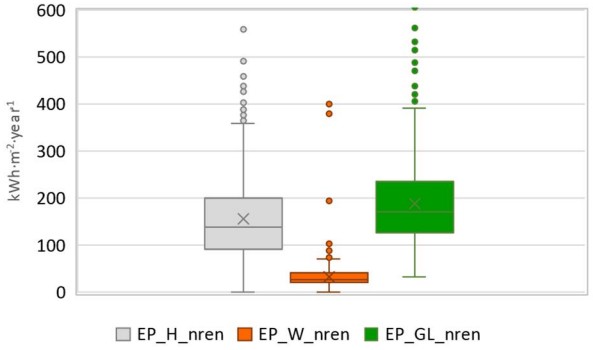
CO_2 EMISSION



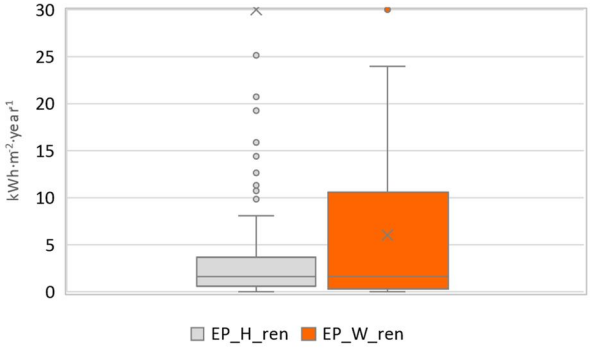
HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE



NOTE: Sample size of the analysed data.

Compactness ratio: 762; Window to useful floor area ratio: 79; U-value of the roof: 126; U-value of the wall: 657; U-value of the floor: 58; U-value of the windows: 763; Inter-storey height: 754; Heated net floor area: 754; Heated gross volume: 753; Heated net volume: 754; Total heating power: 281; DHW system power: 487; CO2 Emission: 735; EP_H_nren: 760; EP_W_nren: 738; EP_GL_nren: 759; EP_H_ren: 559; EP_W_ren: 483